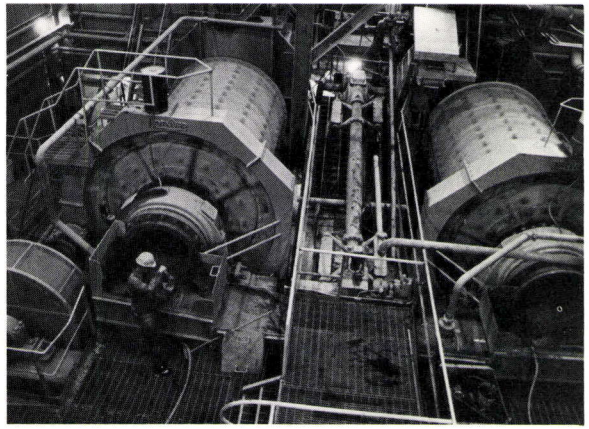
the ore to a flour-like substance preferred by many Stauffer customers.

The various types of phosphate rock, and the processing methods developed by Stauffer chemists and engineers, give the company the capability to provide several grades of phosphate concentrates. This allows the production of diversified fertilizers, required by variable soil and climate conditions throughout the world.

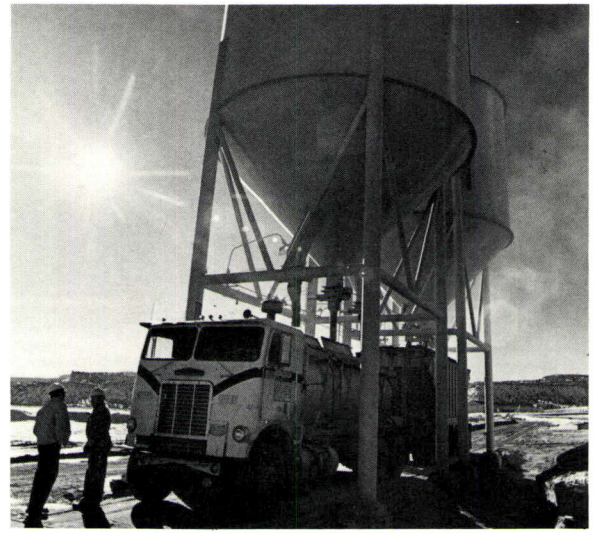
Some of the phosphate concentrates made here at Vernal are sent to a Stauffer fertilizer plant in Salt Lake City. There, Stauffer produces concentrated superphosphate fertilizers, several grades of ammonium phosphates, phosphoric acids and a variety of fertilizers.

Phosphate and its derivatives have numerous other uses as well. It is used in soft drinks and pickling, pharmaceuticals and dental cements, textiles and lithography, jellies and sugars. And research is continuing to find new uses for phosphate-based products.

Crushed ore is stored in "teepees" prior to being fed to the concentrating plant.



8' x 12' rod mills grind the crushed ore preparatory to desliming and flotation.



Phosphate rock concentrates are loaded into contract carrier trucks and shipped 155 miles to Phoston for pulverizing and shipping.

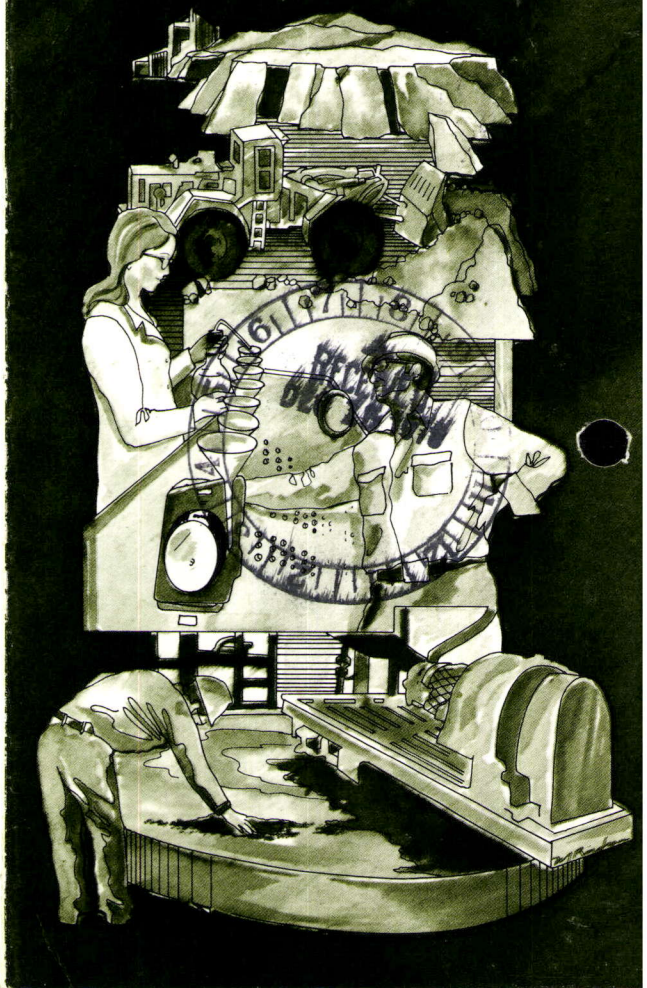
Headquartered in Westport, Connecticut, Stauffer Chemical Company has made a commitment to produce fertilizers which improve crop yields, as well as pesticides that reduce the threat from insects and weeds. Supported by an extensive research effort, Stauffer helps keep the American farmer among the most efficient and productive in the world.

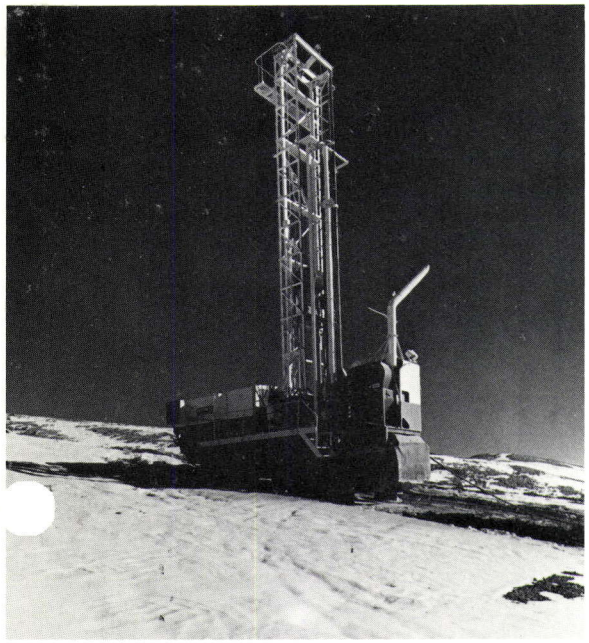
The management of Stauffer Chemical Company is strongly dedicated to being a good corporate citizen, wherever the Company operates. This means complying with the full spirit of laws regarding the environment, equal opportunity, proper handling of products, and providing facilities, training and motivation so that employees work safely. Each Stauffer employee is expected to learn and perform so that these corporate objectives can be achieved.

Stauffer CHEMICALS

Stauffer Chemical Company
Fertilizer & Mining Division
Vernal, Utah
AN EQUAL OPPORTUNITY EMPLOYER-M/F

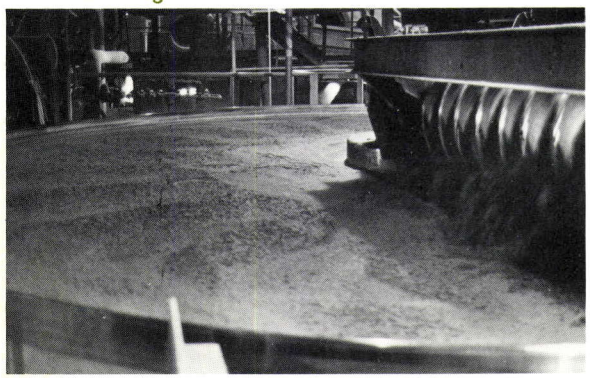
Welcome to Stauffer Chemical Company Vernal, Utah





Blast holes are drilled in the overburden with a rotary drill, then blasted with ANFO.

5-yard shovels load blasted rock to be transported from the area in 40-ton haulage trucks.



Phosphate rock concentrates are filtered to reduce the moisture content prior to drying in a rotary dryer.

Here in northeastern Utah, nearly 110 Stauffer Chemical Company employees mine and process the largest deposit of phosphate in the West. The modern history of phosphate mining in this area began in 1915, when the estimated 700-million-ton phosphate field was discovered. The ore was first mined by the old San Francisco Chemical Company.

Headed by the late Duncan L. King, the San Francisco Chemical Company developed a successful process for which they were awarded the world's outstanding metallurgical award in 1957. A processing plant was built in 1960, and in 1969 Stauffer acquired total interest in the plant and mine. Today, the Vernal operation has an annual payroll of more than $1.5 million, producing 420,000 tons of phosphate concentrate each year.

What is Phosphate?

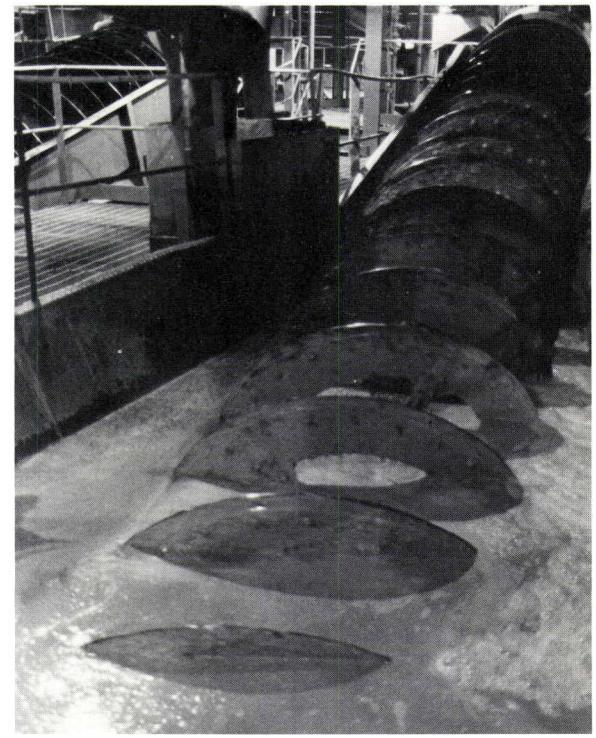
Phosphate, or phosphate rock, is a sedimentary deposit left by an inland sea which covered much of the West about 200 million years ago. Phosphate contains phosphorus, a chemical which exists in all living cells. An essential component of plant growth, phosphorus stimulates early growth and root formation in plants, hastens maturity, and promotes seed production.

Mining Phosphate

Drilling and blasting is required to reach the phosphate rock about 30 to 85 feet below the surface. The exposed ore is drilled, blasted and delivered by truck to the Vernal processing operation. Through a process of filling, contouring and seeding, the overburden is used to restore previously mined areas to the original setting.

Processing Phosphate Ore

After a series of crushing stages, which reduce the ore to 5/8-inch particles, the pea-size ore is fed to the concentrator, where water is added and the ore ground in rod mills. After grinding, the ore is deslimed and prepared for flotation, while the slimes are carried in a slurry to the tailings pond, where the water is reclaimed and pumped back into the system for reuse.



Deslimed ore is dewatered prior to the addition of chemicals for flotation.

Flotation involves the addition of selected chemicals, agitation and blowing air into the pulp. The resulting froth, made up of bubbles with phosphate particles attached, is skimmed from flotation cells. The froths are filtered and dried, producing phosphate rock concentrates. Concentrates are then shipped to Phoston for pulverizing and shipping. Pulverizing reduces